

What Is Claimed Is:

- 1 1. An amplification circuit amplifying an input signal to generate an output signal,
2 said amplification circuit comprising:
 - 3 an amplifier amplifying said input signal, wherein a gain of said amplifier changes
4 when amplifying said input signal; and
 - 5 a component provided across an output of said amplifier, wherein an impedance of
6 said component does not change when amplifying said input signal such that changes in an
7 amplification factor provided by said amplification circuit are minimized when amplifying
8 said input signal to generate said output signal.
- 1 2. The amplification circuit of claim 1, wherein said component comprises a resistor.
- 1 3. The amplification circuit of claim 2, wherein said amplifier contains a first output
2 terminal and a second output terminal, and wherein said resistor is connected to both of said
3 first output terminal and said second output terminal.
- 1 4. The amplification circuit of claim 3, further comprising a feedback circuit across
2 said amplifier, wherein a resistance value of said resistor is chosen using the equation:
3
$$G300 = (1/B300) / [1 + \{ Sc * (1 + P * Vout) + S390 \} * \{ 1 + Q * Vout * (Sc + S390) / Hc \} / (Hc * B300)],$$

4 wherein said resistance = (1/S390), G300 represents an amplification factor of said
5 amplification circuit, B300 represents a feedback factor of said feedback circuit, Sc, P, Q and
6 Hc are determined by a manufacturing process used to implement said amplification circuit.

1 5. The amplification circuit of claim 4, wherein said resistor is integrated into said
2 amplifier.

1 6. A device comprising:
2 an amplification circuit amplifying an input signal to generate an output signal, said
3 amplification circuit comprising:
4 an amplifier amplifying said input signal, wherein a gain of said amplifier
5 changes when amplifying said input signal; and
6 a component provided across an output of said amplifier, wherein an
7 impedance of said component does not change when amplifying said input signal
8 such that changes in an amplification factor provided by said amplification circuit are
9 minimized when amplifying said input signal to generate said output signal.

1 7. The device of claim 6, wherein said component comprises a resistor.

1 8. The device of claim 7, wherein said amplifier contains a first output terminal and
2 a second output terminal, and wherein said resistor is connected to both of said first output
3 terminal and said second output terminal.

1 9. The device of claim 8, wherein said amplification circuit further comprises a
2 feedback circuit across said amplifier, wherein a resistance value of said resistor is chosen
3 using the equation:
4
$$G300 = (1/B300) / [1 + \{ Sc * (1 + P * Vout) + S390 \} * \{ 1 + Q * Vout * (Sc + S390) / Hc \} / (Hc * B300)]$$

5 wherein said resistance = (1/S390), G300 represents an amplification factor of said
6 amplification circuit, B300 represents a feedback factor of said feedback circuit, Sc, P, Q and
7 Hc are determined by a manufacturing process used to implement said amplification circuit.

1 10. The device of claim 9, wherein said resistor is integrated into said amplifier.

1 11. The device of claim 9, wherein said device comprises a wireless base station, said
2 device further comprising:

3 an antenna receiving an external signal;
4 an analog processor processing said external signal to generate said input signal; and
5 an analog to digital converter converting said output signal to a sequence of digital
6 codes.

1 12. A method of implementing an amplification circuit for amplifying an input signal
2 to generate an output signal, said method comprising:

3 providing an amplifier to amplify said input signal, wherein a gain of said amplifier
4 changes when amplifying said input signal;
5 providing a component across an output of said amplifier, wherein an impedance of
6 said component does not change when amplifying said input signal such that changes in an
7 amplification factor provided by said amplification circuit are minimized when amplifying
8 said input signal to generate said output signal.

1 13. The method of claim 12, wherein said component comprises a resistor.

1 14. The method of claim 13, wherein said amplifier contains a first output terminal
2 and a second output terminal, and wherein said resistor is connected to both of said first
3 output terminal and said second output terminal.

1 15. The method of claim 14, further comprising a feedback circuit across said
2 amplifier, wherein a resistance value of said resistor is chosen using the equation:

3 $G300 = (1/B300) / [1 + \{ Sc * (1 + P * Vout) + S390 \} * \{ 1 + Q * Vout * (Sc + S390) / Hc \} / (Hc * B300)]$,
4 wherein said resistance = (1/S390), G300 represents an amplification factor of said
5 amplification circuit, B300 represents a feedback factor of said feedback circuit, Sc, P, Q and
6 Hc are determined by a manufacturing process used to implement said amplification circuit.